

Application Serial No. 10/070,784
Amendment dated January 9, 2004
Reply to Office Action dated July 23, 2003

Amendments to the Specification:

Before paragraph [0001] insert the following heading:

B1

BACKGROUND OF THE INVENTION

Before paragraph [0003] insert the following heading:

B2

SUMMARY OF THE INVENTION

Please replace paragraph [0003] with the following amended paragraph:

B3
[0003] The solution according to this invention is characterized by the characteristics of Claim 1. Advantageous embodiments are shown in the dependant claims a first bevel gear of the angular drive and an output transmission element having a direct and solid connection and located in immediate proximity to each other. The transmission element does not include any elements capable of generating axial forces to act against the housing cover on the housing wall.

Please replace paragraph [0004] with the following amended paragraph:

B4
[0004] The transmission unit according to one form of the invention includes a transmission input shaft and a transmission output shaft separated by a mechanical transmission unit. The mechanical transmission unit includes a transmission basic unit, which is also called base transmission, and an angular drive with a bevel gear drive, consisting of a first bevel gear and a second bevel gear, where the second bevel gear can be coupled to the transmission output shaft in an at least indirectly rotationally fixed manner, while the first bevel gear of this invention is in the immediate proximity of the output of the transmission basic unit and is directly coupled with this shaft, such that there is no intervening separate connecting shaft between the output shaft and the first bevel gear. Thus, the first bevel gear is not mounted on an extension of the shaft or is rotationally coupled with a shaft, which supports the transmission element that functions as output or which is connected to the same. Thus, the arrangement of shafts in the transmission basic unit is not modified. The transmission housing consists of at least one housing, which surrounds the transmission basic unit, which can be connected to a housing cover in the form of a transmission housing component that surrounds the

B4
angular drive at least in part. Thus, the transmission basic unit of the invention does not include elements that generate axial force that pushes against the housing cover on the housing wall, such as a piston that operates in the axial direction.

[Please replace paragraph [0006] with the following amended paragraph:

[0006] There are here essentially two basic configurations:

- B5
1. Inclusion of driving elements on the first bevel gear and/or the transmission unit, which forms the output of the transmission basic unit, and matching complementary driving elements, such as driving recesses on the transmission element, which forms the output of the transmission basic unit, and/or the first bevel gear seen in an axial direction relative to the direction of the transmission axle, specifically the transmission input axle, viewed in the installed position.
 2. Inclusion of driving elements on the first bevel gear and/or the transmission unit, which forms the output of the transmission basic unit, and matching complementary driving elements, such as driving recesses on the transmission element, which forms the output of the transmission basic unit, and/or the first bevel gear seen in a radial direction relative to the direction of the transmission axle, specifically the transmission input axle, viewed in the installed position.

[Before paragraph [0018] insert the following heading:

B6

BRIEF DESCRIPTION OF THE DRAWINGS

[Please replace paragraph {0018} with the following paragraph:

[0018] The solution of this invention is explained by use of Figures, which show the following:

Fig. 1 shows a schematically simplified view of a transmission unit according to the design of the invention in an axial direction;

B7
~~Fig. 2a and 2b show a schematically~~ Fig. 2 shows a schematically simplified view of the support of transmission output shaft A for two alternative angles between the transmission input shaft and the transmission output shaft;

B7 Fig. 3 shows the possibilities for adding the angular drive in a simplified view corresponding to view A in Figures 1 or 2;

Fig. 4.1 – 4.4 show the possibilities to insert the transmission unit in bus propulsion systems with alternative requirements.

[Before paragraph [0019] insert the following heading:

B8 DETAILED DESCRIPTION

[Please replace paragraph [0019] with the following amended paragraph:

B9 [0019] Fig. 1 shows the connection, which is designed according to the invention, of an angular drive 4 to the transmission basic unit 25, by reference to a segment of an axial cross section of transmission unit 1 in a schematically simplified view. Basic unit 25 may consist of a hydrodynamic and a mechanical transmission component. The transmission unit contains a transmission input shaft E and at least one transmission output shaft A. The transmission input shaft E and the transmission output shaft A are situated such that their theoretical axes of rotation R_E and R_A intersect at an angle. The transmission unit 1 contains at least ~~on~~ one transmission basic unit 25, which is situated between the transmission input shaft E and the transmission output shaft A. The transmission basic unit 25 includes a mechanical transmission component 2 and a bevel gear drive 3 designed as an angular drive 4, which is connected to the transmission output shaft A. The transmission unit 1 also contains a transmission ~~housing~~ housing, which consists of at least two parts. In the present case, this includes at least one transmission base housing 6 and a transmission housing component 7, which surrounds the angular drive at least in part and which can be connected to transmission base housing 6. However, the transmission housing component 7 may consist of multiple components.

[Please replace paragraph [0027] with the following amended paragraph:

B10 [0027] ~~Figures 2a and 2b present~~ Fig. 2 presents a schematically simplified view of the support of transmission output shaft A for two different angles between the transmission input shaft E and the transmission output shaft A. The variation denoted by I corresponds to an ~~angle α_1~~ angle α_1 of 60° between the transmission input shaft E and

B10
the transmission output shaft A, whereas the variation denoted by II corresponds to an angle α_2 of 80° between the transmission input shaft E and the transmission output shaft A.

Please replace paragraph [0029] with the following amended paragraph:

B11
[0029] Transmission housing component 7 can be linked to transmission housing 8 by positive and/or non-positive locks. It is preferable that the linkage be fastened by screw and/or plug-type connectors. The recesses and holes in transmission base housing 6 and transmission housing component 7 required to achieve the linkage are preferably formed such that rotation, viewed along the circumference of transmission unit 1, is feasible, such that alternative placements of bevel gear drive 3 are possible, particularly with respect to placement of the second bevel gear 9 and thus the angular drive 4 relative to the assembly position of the transmission unit, and thus also in the position of transmission housing 5 relative to the latter. Possible positions are shown in Fig. 3 for a view A corresponding to Fig. 1 or 2. This possibility is of special significance, if transmission housing 5 has a particular structure that must be incorporated in a particular position. This is the case, whenever rills or channels for lubricants or the like must be included. ~~The output possibilities relative to the mounted position are denoted respectively by A', A'', and A''' in Fig. 3.~~
